

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Wireless Telecommunications Bureau	)	
Seeks Comments Regarding Intelligent	)	WT Docket No. 01-90
Transportation System Applications Using	)	
Dedicated Short Range Communications	)	

**REPLY COMMENTS OF THE INTELLIGENT  
TRANSPORTATION SOCIETY OF AMERICA**

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May 31, 2001

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**REPLY COMMENTS OF THE INTELLIGENT  
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The Intelligent Transportation Society of America (“ITS America”),<sup>1</sup> by its attorneys hereby respectfully submits its Reply to the Comments in response to the *Request for Comment* issued by the Commission in the above-captioned proceeding.<sup>2</sup> The Commission received Comments from six parties, including ITS America, on the subjects raised in the *Request for Comment*.<sup>3</sup> While raising various issues for the FCC to consider in promulgating service and

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<sup>1</sup> ITS America is organized to be the focal point for facilitating the consensus necessary to develop and deploy Intelligent Transportation System (“ITS”) applications for improving the efficiency and safety of the nation’s surface transportation systems. Members include organizations that develop, deploy, market, research, buy, sell and use ITS products, services and systems, and representing the private sector, local, state, federal and international government agencies, academic institutes and research centers, and other associations. ITS America also serves as a utilized Federal Advisory Committee to the U.S. Department of Transportation. 5 U.S.C. Appendix.

<sup>2</sup> *Wireless Telecommunications Bureau Seeks Comment Regarding Intelligent Transportation System Applications Using Dedicated Short Range Communications*, WT Docket No. 01-90, Public Notice, DA 01-686 (rel. March 16, 2001) (“*Request for Comment*”).

<sup>3</sup> See Comments of ITS America, WT Docket 01-90 (May 16, 2001); Comments of Federal Signal Corp. (“Federal Signal”), WT Docket 01-90 (May 15, 2001); Comments of TransCore Corporation (“TransCore”), WT Docket 01-90 (May 18, 2001); Comments of Mark IV Industries, Limited I.V.H.S. Division (“Mark IV”), WT Docket 01-90 (May 16, 2001);

licensing rules for the 5.85-5.925 GHz band (the “5.9 GHz Band”), the record unanimously supports the adoption of a Notice of Proposed Rulemaking that enables the use of the band by public safety and private wireless users to provide critically needed ITS services.

To this end, the development of Dedicated Short Range Communications (DSRC) standards, technologies and products requires a careful balancing among the interests of the public and private sectors to permit the development of DSRC applications, while minimizing overall equipment costs. The same balancing is required in the development of service and licensing rules for the band. ITS America thus concurs with Mark IV (Comments at 2) that there is a clear “need for maximum technical flexibility so that market forces can optimize development of new and innovative ITS technologies....” This technical flexibility, in turn, will enable the rapid development and introduction of new DSRC-based technologies and services without the need for extensive regulatory proceedings.

### **DSRC STANDARDS ISSUES**

The DSRC Industry Consortium, which includes TransCore , Mark IV and others, has been actively and constructively participating in the DSRC Standards Writing Group under the auspices of the American Society for Testing and Materials (“ASTM”) Committee E-17.51. As noted in ITS America’s Comments (at 4), this Group has down-selected to two candidate technologies: (1) Motorola’s FreeSpace; and (2) IEEE 802.11(a) standard using the Orthogonal Frequency Division Multiplex (“OFDM”) modulation. ITS America also noted that the Group is also open to other technical solutions that ensure an efficient use of the spectrum. Comments at 4. Federal Signal notes that it is also developing a technology, its Emergency Radio Data

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Comments of Warren C. Havens and Telesaurus Holdings GB, LLC (“Telesaurus”), WT Docket 01-90 (May 17, 2001); Comments of the Public Safety Wireless Network Program (“PSWN”), WT Docket 01-90 (May 16, 2001).

System (“ERDS”), that is capable of delivering driver advisory services. Federal Signal Comments at 2. ITS America encourages Federal Signal to participate in the ASTM E-17.51 Standards Writing Group. The selection of a single, open, national standard for DSRC Public Safety applications is the highest priority of the Standards Writing Group’s open and inclusive process. This Writing Group would be able to ascertain the capability and applicability of Federal Signal’s ERDS to deliver DSRC services in the 5.9 GHz Band.

ITS America further notes that the Standards Writing Group held its scheduled meeting on May 17, 2001, in Detroit, Michigan. At this meeting, a constructive dialogue began between the Writing Group and representatives from the automotive industry, during which an urgent need to deploy in-vehicle DSRC applications was expressed. The automotive industry noted that the Writing Group needs to demonstrate viable and robust DSRC applications.

The next meeting of the Writing Group is scheduled for June 26-27, 2001, in Washington, DC. At that meeting, the Writing Group is expected to review initial test results and evaluations. Subsequent meetings of the Writing Group are scheduled monthly through September in Seattle (July 26-27, 2001), El Segundo, CA (August 23-24, 2001), and Albany, NY (September 13-14).

A number of standards issues remain outstanding. TransCore expresses concern with the extreme range requirements under evaluation by the Standards Writing Group. TransCore Comments at 3. ITS America acknowledges that the Standards Writing Group has found resolution of the range issue to be problematic despite the fact that the vast majority of currently proposed applications can be supported within a one thousand foot range. Further standards work on the extreme range issue is expected.

The Standards Writing Group is also addressing U.S.-Canada-Mexico coordination of DSRC. ITS America seeks the support of the Commission for this coordination effort.

### **DSRC ELIGIBILITY ISSUES**

In its Comments, ITS America noted a consensus among ITS stakeholders that the 5.9 GHz spectrum should be allocated between public safety and private wireless uses. ITS America Comments at 5. ITS America further noted that given these anticipated uses, the 5.9 GHz Band would not be well suited to Commercial Mobile Radio Service (“CMRS”) uses. Comments at 5-6. A number of other Comments addressed this issue as well. Federal Signal, for example, stated (Comments at 3) that “[p]ublic safety use of this spectrum should be given priority in any channelization plan adopted by the Commission.” Mark IV (Comments at 2) stated that it “supports current efforts to develop DSRC standards to encompass many Public Safety applications as well as possible mixtures of Private/Public and Commercial applications.” TransCore similarly stated that it “believes that only Public safety and Private Radio applications should be permitted in this band.” TransCore Comments at 2.

These Comments, as well as the proceedings reflected in ITS America’s Status Report to the FCC of October 2000, have consistently reflected the view that DSRC communications will reflect a mix of public and private sector usage. These applications, which indeed may even include mixed uses on the same message, all are valuable uses of the spectrum and should be accommodated in any band channelization plan. For this reason, ITS America advocated that the FCC adopt an expansive definition of Public Safety services applicable to the 5.9 GHz Band. In so doing, the Commission will provide needed service flexibility to enable the deployment of DSRC applications in a manner responsive to market needs.

PSWN expresses concern regarding the characterization of a portion of the 5.9 GHz Band as dedicated for public safety uses. PSWN Comments at 4-5. PSWN otherwise supports the proposed services (Comments at 4) and acknowledges that “the public safety community, through its close relationship with the transportation community, has a tremendous stake in the way the spectrum for DSRC is ultimately allocated and managed.” PSWN further acknowledges that “DSRC applications currently under development may be adapted for the public safety community to suit unique needs...” Comments at 6. PSWN states though that “the existing DSRC applications cited by ITS-A ...(e.g., electronic toll collection, electronic parking payment) are clearly not within the scope of ‘public safety’ entities....” Comments at 4.

ITS America understands PSWN’s concern that any DSRC spectrum designated for “public safety” usage not mistakenly be taken as a substitute for other critically needed public safety spectrum. ITS America, indeed, strongly agrees with the PSWN Program regarding “the urgent need for allocation of additional spectrum to meet current and future public safety wireless needs.” PSWN Comments at 5. ITS America also agrees with PSWN that the DSRC spectrum is not the Public Safety spectrum critically needed and sought after by the Public Safety community in support of voice and video communications. Comments at 5.

The DSRC spectrum has never been designated to support voice communications, whether over a short range or by wide-area wireless coverage. The definition of DSRC adopted by the FCC makes this clear:

the use of non-voice radio techniques to transfer data over short distances between roadside and mobile radio units, between mobile radio units, and between portable and mobile units to perform operations related to the improvement of traffic flow, traffic safety and other intelligent transportation system applications, in a variety of public and commercial environments. DSRC systems may also transmit status and instructional messages related to the units involved.<sup>4</sup>

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<sup>4</sup> 47 C.F.R. § 90.7.

Furthermore, DSRC applications are intended for short distances. Although the standards activities are not yet complete, an overwhelming majority of the applications require less than a

one thousand foot range. Obviously this range limitation and lack of voice capability limits the ability of DSRC applications to support the needs of the PSWN Program. Accordingly, ITS America urges that the FCC not view the DSRC spectrum as a substitute for other needed public safety spectrum.

PSWN, however, is mistaken in its suggestion that DSRC services and users, and the transportation community more generally, do not qualify under the FCC's public safety definition. PSWN Comments at 4. Indeed, the FCC currently licenses in the Public Safety pool under Part 90 of its Rules many local and state transportation authorities, highway maintenance organizations and others for the use of frequencies to assist in the efficient management of the nation's transportation infrastructure. The American Association of State Highway Transportation Officials ("AASHTO") is a certified Public Safety pool frequency coordinator.

PSWN also mistakenly suggests that all electronic toll and payment services cannot be classified as public safety services. Comments at 4. Existing electronic toll services are in fact operated by state and local government agencies and have been proven to enhance traffic safety. However, even assuming arguendo that electronic toll and electronic payment services would not be eligible as public safety services, there are a number of DSRC public safety applications, such as HAZMAT clearance, that are under evaluation by the DSRC Writing Group that undeniably meet any public safety eligibility requirement. Those evaluations showed that there are a number of unique DSRC applications that can meet the needs of the public safety community for short-range, data transfers, including short-range video communications.

ITS America welcomes a dialogue between the more traditional public safety and the transportation communities, as suggested by PSWN. This dialogue may be further engaged within the context of the newly established ITS Public Safety Program by the U.S. Department



of Transportation's ITS Joint Program Office (ITS JPO). ITS America will solicit PSWN's participation in this initiative.

### **DSRC DEPLOYMENT ISSUES**

In its Comments, ITS America suggested that the FCC's Notice of Proposed Rulemaking (NPRM) consider a mixed use of the band, which includes Public Safety and private wireless applications. ITS America Comments at 5-6. ITS America firmly believes that the DSRC spectrum is neither suitable nor intended for cellular-based commercial wireless applications, such as Commercial Mobile Radio Services ("CMRS"). Indeed, no Commenter argued that CMRS should be permitted in the 5.9 GHz Band.

The National ITS Architecture envisioned a class of wide area wireless systems as well as a short range system dedicated to meeting certain ITS needs. In conformance with this Architecture, ITS America welcomes and supports the integration and deployment of both 5.9 GHz DSRC and wide-area wireless communications in an integrated fashion, as suggested by Telesaurus. Telesaurus Comments at 5. In fact, DSRC and wide-area wireless services must work together in a complementary manner, whereby DSRC provides a "last mile" solution. Given that private radio applications and commercial entities will provide services in the DSRC spectrum, the allocation must be consistent with flexible participation while meeting the critical public safety needs of the transportation industry (including roadside-to-vehicle and vehicle-to-vehicle applications). ITS America believes, however, that any action to adopt additional permitted uses of the 5.9 GHz Band, such as wireless point-to-point or point-to-multipoint usage, of the 5.9 GHz Band prior to the deployment of the nationwide DSRC infrastructure, would not further the goals of the DSRC allocation.

## **CONCLUSION**

ITS America requests that the Commission release a Notice of Proposed Rulemaking proposing service and licensing rules for the DSRC spectrum allocation consistent with the views expressed herein and in its Comments. ITS America urges that the NPRM provide for both service and technical flexibility to ensure the development of a vibrant and competitive DSRC marketplace.

Respectfully submitted,

**INTELLIGENT TRANSPORTATION SOCIETY OF  
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May 31, 2001

## **CERTIFICATE OF SERVICE**

I, Mark D. Johnson, hereby certify that on this 31<sup>st</sup> day of May, 2001, I caused copies of the preceding "Reply Comments of the Intelligent Transportation Society of America" to be mailed, first-class, postage prepaid, or by hand as indicated (\*) to the following:

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